IN THE CLAIMS

This listing of claims replaces all prior versions, and listings, in this application.

1. (previously presented) A method for determining coping capacity of a human or non-human mammal for exposure to a psychological stressor in which coping capacity is defined as responsiveness of a whole blood cell sample to induction of superoxide production by a chemical inducer which stimulates superoxide production in neutrophils, said stressor also inducing superoxide production in neutrophils of a human or non-human mammal of the same species susceptible to said stressor, the method comprising:

(a) obtaining a test whole blood sample comprising neutrophils from said human or non-human mammal, said sample being taken after exposure of said human or non-human mammal to said stressor for a time period whereby neutrophils in a human or non-human mammal of the same species susceptible to said stressor will exhibit increased superoxide;

(b) determining basal superoxide production in said test sample in the absence of induction of superoxide production by a chemical inducer;

(c) determining superoxide production in said test sample in the presence of said chemical inducer after a time period and under conditions suitable for superoxide production to be observed in a control whole blood sample, said control sample being free or substantially free of stress-induced activation or at least derived from one or more humans or one or more non-human mammals of the same species subject to the same conditions minus said stressor;

(d) determining the chemically-induced superoxide production in (c) above said basal superoxide production; and

(e) comparing chemically-induced superoxide production above basal determined in said test sample with superoxide production above basal determined in a control sample as defined in (c) under the same in vitro conditions;

wherein lower superoxide production above basal in said test sample compared to in said control sample is indicative of stress effect by said stressor and the degree of

chemically-induced superoxide production above basal in said test sample is a measure of coping capacity for said exposure to said stressor.

Claims 2-4 (canceled)

5. (previously presented) A method according to claim 1, wherein said test sample is obtained from a human.

Claim 6 (canceled)

7. (previously presented) A method according to claim 1, wherein said test sample is obtained from a farmed animal.

8. (previously presented) A method according to claim 1, wherein said test sample is obtained from a wild mammal.

9. (previously presented) A method according to claim 1, wherein the inducer capable of stimulating superoxide production in neutrophils is phorbol myristate acetate (PMA), N-Formyl-Met-Leu-Phe (fLMP chemotactic peptide), zymosan, lipopolysaccharide or adrenaline.

10. (previously presented) A method according to claim 1, wherein superoxide production is detected using luminol or isoluminol as an amplifier and the resulting chemiluminescence is measured.

11. (previously presented) A method according to claim 1, wherein the inducer capable of stimulating superoxide production in neutrophils is phorbol myristate acetate (PMA), superoxide production is detected using luminol as an amplifier and the resulting chemiluminescence is measured.

12. (currently amended) A method of screening for a stress-relieving drug, the method comprising:

(a) administering a test compound to a human or non-human mammal;

(b) exposing said human or non-human mammal to a psychological stressor and measuring coping capacity using a method according to claim [[2]] 1; and

(c) comparing coping capacity after administration of the test compound to coping capacity in the absence of the test compound, wherein an increase in coping capacity after administration of the test compound is indicative of stress-relieving ability of said test compound.

13. (previously presented) A method according to claim 12, wherein the test compound is administered to a non-human mammal.

14. (previously presented) A method according to claim 12, further comprising synthesizing a stress-relieving drug identified by said method, and/or formulating the drug into a pharmaceutical composition.

Claim 15 (canceled)

16. (previously presented) A method of treating a human or non-human mammal suffering from stress which comprises providing a stress-relieving treatment, such as administering a stress-relieving drug, to a human or non-human mammal identified as suffering from stress using a method according to claim 1.

17. (previously presented) A method of testing the efficacy of a proposed stress-relieving treatment which comprises exposing a human or non-human mammal to a psychological stressor in the presence and absence of said treatment and determining their coping capacity using a method according to claim 1.

Claims 18-23 (canceled)

24. (previously presented) A method according to claim 7, wherein the farmed animal is a cow, pig, sheep, lamb or poultry.